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SEQUENCE LISTING

<110> ~~NIELSSON, ROLAND~~
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STRANDBERG, LEIF

<120> PEPTIDE-BASED PASSIVE IMMUNIZATION THERAPY FOR
TREATMENT OF ATHEROSCLEROSIS

<130> 7303CIP

<140> 10/679,032

<141> 2003-10-03

<160> 79

<170> PatentIn Ver. 3.2

<210> 1

<211> 369

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 1

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ccagggaagg ggctggagtg ggtctcatcc attagtagta gtagtagtta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca attccaagaa cagctgtat 240
ctgcaaatga acagcctgag agccgaggac actgccgtgt attactgtgc gagagtcagt 300
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gtgagcagc                                     369
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<210> 2

<211> 336

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 2

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tcctgctctg gaagcaggtc caacattggg aataattatg tatcctggta tcagcagctc 120
ccaggaaagg cccccaaact cctcatctat ggtaacaaca atcggccctc aggggtccct 180
gaccgattct ctggctccaa gtctggcacc tcagcctccc tggccatcag tgggctccgg 240
tccgaggatg aggctgatta ttactgtgca gcatgggatg acagcctgaa tggtcattgg 300
gtgttcggcg gaggaaccaa gctgacgggc ctagggt                                     336
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<210> 3
 <211> 366
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 nucleotide sequence

<400> 3
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 tcctgtgcgg cctctggatt caccttcagt gactactaca tgagctgggt ccgccaggct 120
 cccgggaagg ggctggagtg ggtatcgggt gttagttgga atggcagtag gacgcactat 180
 gcagactctg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
 ctgcaaatga acagcctgag agccgaggac actgccgtgt attactgtgc gagagcggct 300
 aggtactcct actactacta cggtatggac gtctggggcc aaggtacact ggtcaccgtg 360
 agcagc 366

<210> 4
 <211> 327
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 nucleotide sequence

<400> 4
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 tcctgttctg gaagcagctc caacatcgga aataatgctg taaactggta tcagcagctc 120
 ccaggaacgg ccccccact cctcatctat ggggaatgac ggccggccctc aggggtccct 180
 gaccgattct ctggctccaa gtctggcacc tcagcctccc tggccatcag tgggtcccg 240
 tccgaggatg aggtcgatta ttactgtcag acctggggca ctggccgggg ggtattcggc 300
 ggaggaacca agctgacggt cctaggt 327

<210> 5
 <211> 366
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 nucleotide sequence

<400> 5
 gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggggtc cctgagactc 60
 tcctgtgcag cctctggatt cacctttagt agctattgga tgagctgggt ccgccaggct 120
 ccagggaagg ggctggagtg ggtctcaagt atcagtggta gtggctcgtag gacatactac 180
 gcagactccg tgcagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
 ctgcaaatga acagcctgag agccgaggac actgccgtgt attactgtgc gagattggct 300
 tcctatgggt cggggagttt cggttttgac tactggggcc aaggtacact ggtcaccgtg 360
 agcagc 366

<210> 6
 <211> 333
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 nucleotide sequence

<400> 6
 cagtctgtgc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc 60
 tcttgttctg gaagcagctc caatatcgga agtaattatg tatcctggta tcagcagctc 120
 ccaggaacgg cccccaaact cctcatctat ggtaactaca atcggccctc aggggtccct 180
 gaccgattct ctggctccaa gtctggcacc tcagcctccc tggccatcag tgggctccgg 240
 tccgaggatg aggctgatta ttactgtgca gcatgggatg acagcctgag tggttgggtg 300
 ttcggcggag gaaccaagct gacggtccta ggt 333

<210> 7
 <211> 378
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 nucleotide sequence

<400> 7
 gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggggc cctgagactc 60
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 ccaggaagg ggctggagtg ggtctcaact cttggtggta gtggtgggtg tagcacatac 180
 tacgcagact ccgtgaaggg ccggttcacc atctccagag acaattccaa gaacacgctg 240
 tatctgcaaa tgaacagcct gagagccgag gacactgccg tgtattactg tgcgaagtta 300
 ggggggcgat cccgatatgg gcggtggccc cgccaatttg actactgggg ccaaggtaca 360
 ctggtcaccg tgagcagc 378

<210> 8
 <211> 333
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 nucleotide sequence

<400> 8
 cagtctgtgc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc 60
 tcctgtctctg gaagcagctc caacattgga aataactatg tatcctggta tcagcagctc 120
 ccaggaacgg cccccaaact cctcatctat agtaataatc agcggccctc aggggtccct 180
 gaccgattct ctggctccaa gtctggcacc tcagcctccc tggccatcag tgggctccgg 240
 tccgaggatg aggctgatta ttactgtgca gcatgggatg acagcctgag tcattggctg 300
 ttcggcggag gaaccaagct gacggtccta ggt 333

<210> 9
 <211> 372
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 9

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gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt gactactaca tgagctggat ccgccaggct 120
ccagggaagg ggctggagtg ggtctcaagt atcagtggcc gtgggggtag ttcctactac 180
gcagactccg tgagggggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatac acagcctgag agccgaggac actgccgtgt attactgtgc gagactttcc 300
tacagctatg gttacgaggg ggcctactac tttgactact gggggccaggg tacactggtc 360
accgtgagca gc 372
```

<210> 10

<211> 333

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 10

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cagtctgtgc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc 60
tcctgtctcg gaagcagctc caacattggg aataattatg tatcctggta tcagcagctc 120
ccaggaaagg ccccaaaact cctcatctat aggaataatc agcgccctc aggggtccct 180
gaccgattct ctggctccaa gtctggcacc ttagcctccc tggccatcag tgggctccgg 240
tccgaggatg aggctgatta ttactgtgca acctgggatg acagcctgaa tgggtgggtg 300
ttcggcggag gaaccaagct gacggtccta ggt 333
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<210> 11

<211> 363

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 11

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gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttagc agctatgcca tgagctgggt ccgccaggct 120
ccagggaagg ggctggagtg ggtctcatcc attagtagta gtgggtcgttt catttactac 180
gcagactcaa tgaagggccg cttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatac acagcctgag agccgaggac actgccgtgt attactgtac gaggctccgg 300
agagggagct acttctgggc ttttgatata tggggccaag gtacactggg caccgtgagc 360
agc 363
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<210> 12

<211> 333

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 12

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cagtctgtgc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc 60
tcctgttctg gaagcagctc caacattggc ggtgagtctg tatcctggta tcagcagctc 120
ccaggaacgg cccccaaact cctcatctat agtaataatc agcggccctc aggggtccct 180
gaccgattct ctggctccaa gtctggcacc tcagcctccc tggccatcag tgggctccgg 240
tccgaggatg aggctgatta ttactgtgca gcatgggatg acagcctgaa tggttgggtg 300
ttcggcggag gaaccaagct gacggtccta ggt                                     333
```

<210> 13

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 13

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ggtgtgcatt ccgaggtgca gctgttgag                                     30
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<210> 14

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 14

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gacgtacgac tcacctgagc tcacggtgac cag                                     33
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<210> 15

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 15

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ggtgtgcatt ccagtcctgt gctgactcag                                     30
```

<210> 16

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 16

gacgtacgtt ctactcacct aggaccgtca gctt

34

<210> 17

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 17

atgggtgaca atgacatc

18

<210> 18

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 18

aagcttgcta gcgtacg

17

<210> 19

<211> 369

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic nucleotide sequence

<400> 19

gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt cacctttaga acgtattgga tgacctgggt ccgccaggct 120
ccaggggaagg ggctggagtg ggtctcatct attagcagta gcagtaatta catattctac 180
gcagactcag tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac actgccgtgt attactgtgc gagactcaga 300
cggagcagct ggtacggggg gtactgggtc gaccctggg gccaaaggta actggtcacc 360
gtgagctca 369

<210> 20

<211> 336

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 20

```
cagtctgtgc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc 60
tcctgctctg gaagcagctc caacattggg aataattatg tatcctggta tcagcagctc 120
ccaggaacgg cccccaaact cctcatctat aggaataatc agcggccctc aggggtccct 180
gaccgattct ctggctccaa gtctggcacc tcagcctccc tggccatcag tgggtccgg 240
tccgaggatg aggctgatta ttactgtgca gcatgggatg acagcctgaa tggtcattgg 300
gtgttcggcg gaggaaccaa gctgacggtc ctaggt 336
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<210> 21

<211> 369

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 21

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gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggggc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt agcaactaca tgagctgggt ccgccaggct 120
ccaggaagg ggctggagtg ggtctcatcc attagtagta gtagtagtta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac actgccgtgt attactgtgc gagagtaggc 300
cggataaact ggaagacggg gcatgctttt gatatctggg gccagggtag actggtcacc 360
gtgagctca 369
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<210> 22

<211> 333

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 22

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cagtctgtgc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc 60
tcctgctctg gaaggaccta caacattgga aataattatg tatcgtggta tcagcagctc 120
ccaggaacgg cccccaaact cctcatctat ggtaacatca atcggccctc aggggtccct 180
gaccgattct ctggctccaa gtctggcacc tcagcctccc tggccatcag tgggtccgg 240
tccgaggatg aggctgatta ttactgtgca gcatgggatg tcaggctgaa tggttgggtg 300
ttcggcggag gaaccaagct gacggtccta ggt 333
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<210> 23

<211> 381

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 23
gaggtgcagc tggttgagtc tgggggaggc ttggtacagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttccgt gactactacg tgagctggat ccgccaggct 120
ccaggaagg ggctggagt ggtctcaagt attagtggta gtgggggtag gacatactac 180
gcagactccg tggagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac actgccatgt attactgtgc cagagtatcc 300
gcccttcgga gacccatgac tacagtaact acttactggt tcgaccctg gggccaaggt 360
acactgggtca ccgtgagctc a 381

<210> 24
<211> 333
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 24
cagtctgtgc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc 60
tcctgtctcg gaaggagctc caacattggg aatagttatg tctcctggta tcagcagctc 120
ccaggaacgg ccccccact cctcatctat aggaataatc agcggccctc aggggtccct 180
gaccgattct ctggctccaa gtctggcacc tcagcctccc tggccatcag tgggctccgg 240
tccgaggatg aggctgatta ttactgtgca ggatgggatg acaccctgcg tgcttgggtg 300
ttcggcggag gaaccaagct gacggtccta ggt 333

<210> 25
<211> 360
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 25
gaggtgcagc tggttgagtc tgggggaggc ttggtacagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt aacgcctgga tgagctgggt ccgccaggct 120
ccaggaagg ggctggagt ggtctccgct attagtggta gtggtaacac atactatgca 180
gactccgtga agggccggtt caccatctcc agagacaatt ccaagaacac gctgtatctg 240
caaatgaaca gcctgagagc cgaggacact gccgtgtatt actgtgagag agcctccac 300
cgtatattag gttatgcttt tgatatctgg ggccagggtg cactggtcac cgtgagctca 360

<210> 26
<211> 328
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 26
cagtctgtgc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc 60

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tcttgttctg gaagccgctc caacatcggg agaaatgctg ttagttggta tcagcagctc 120
ccaggaacgg cccccaaact cctcatctat gctaacagca atcggccctc aggggtccct 180
gaccgattct ctggctccaa gtctggcacc tcagcctccc tggccatcag tgggtcccg 240
tccgaggatg aggctgatta ttactgtgca gcatgggatg gcagcctgaa tggttgggtg 300
ttcggcggag gaaccaagct gacggtcc                                     328
```

<210> 27

<211> 363

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 27

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gaggtgcagc tggtggagtc tgggggagggc ttggtacagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt aacgcctgga tgagctgggt ccgccaggct 120
ccaggaagg ggctggagtg ggtctcaagt attagtgttg gtggacatag gacatattat 180
gcagattccg tgaagggccg gtccaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac actgccgtgt attactgtgc acggatacgg 300
gtgggtccgt ccggcggggc ctttgactac tggggccagg gtacactggg caccgtgagc 360
tca                                     363
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<210> 28

<211> 333

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 28

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cagtctgtgc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc 60
tcctgtctcg gaagcaacac caacattggg aagaactatg tatcttggta tcagcagctc 120
ccaggaacgg cccccaaact cctcatctat gctaatagca atcggccctc aggggtccct 180
gaccgattct ctggctccaa gtctggcacc tcagcctccc tggccatcag tgggtcccg 240
tccgaggatg aggctgatta ttactgtgcg tcatgggatg ccagcctgaa tggttgggtg 300
ttcggcggag gaaccaagct gacggtccta ggt                                     333
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<210> 29

<211> 378

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide sequence

<400> 29

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gaggtgcagc tggtggagtc tgggggagggc ttggtacagc ctgggggggtc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt aacgcctgga tgagctgggt ccgccaggct 120
ccaggaagg ggctggagtg ggtctcatcc attagtagta gtagtagtta catatactac 180
gcagactcag tgaagggccg atccaccatc tccagagaca attccaagaa cacgctgtat 240
```

```

ctgcaaatga acagcctgag agccgaggac actgccgtgt attactgtgc gaggctcaca 300
aatattttga ctgggttatta tacctcagga tatgcttttg atatctgggg ccaaggtaca 360
ctggtcaccg tgagctca                                     378

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```

<210> 30
<211> 333
<212> DNA
<213> Artificial Sequence

```

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<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence

```

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<400> 30
cagtctgtgc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc 60
tcctgtctctg gaagcacctc caacattggg aagaattatg tatcctggta tcagcagctc 120
ccaggaacgg cccccaaact cctcatctat ggtaacagca atcgccctc aggggtccct 180
gaccgattct ctggctccaa gtctggcacc tcagcctccc tggccatcag tgggctccgg 240
tccgaggatg aggctgatta ttactgtgca gcatgggatg ccagcctcag tggttgggtg 300
ttcggcggag gaaccaagct gacggtccta ggt                                     333

```

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<210> 31
<211> 363
<212> DNA
<213> Artificial Sequence

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```

<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence

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<400> 31
gaggtgcagc tggtggagtc tgggggaggc ttggtacagc ctgggggggc cctgagactc 60
tcctgtgcag cctctggatt caccttcagt agttcttgga tgagttgggt ccgccaggct 120
ccaggaaggg ggctggagtg ggtctcatcc attagtagta gtagtagtta catatactac 180
gcagactcag tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
ctgcaaatga acagcctgag agccgaggac actgccgtgt attactgtgc gagagtaggg 300
aactacgggt tctaccacta catggacgtc tggggccaag gtacactggg caccgtgagc 360
tca                                     363

```

```

<210> 32
<211> 333
<212> DNA
<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence: Synthetic
      nucleotide sequence

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<400> 32
cagtctgtgc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc 60
tctgtgtctg gaggcagctc aaacatcgga aaaagagggtg taaattggta tcagcagctc 120
ccaggaacgg cccccaaact cctcatctat ggtaacagaa atcgccctc aggggtccct 180
gaccgattct ctggctccaa gtctggcacc tcagcctccc tggccatcag tgggctccgg 240
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ttcggcggag gaaccaagct gacggtccta ggt                                     333

```

<210> 33
 <211> 366
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 nucleotide sequence

<400> 33
 gaggtgcagc tgttggagtc tgggggagggc ttggtacagc ctgggggggtc cctgagactc 60
 tcctgtgcag cctctggatt cacctttagt agctattgga tgagctgggt ccgccaggct 120
 ccagggaagg ggctggagtg ggtctcatcc attagtagta gtagtagtta catatactac 180
 gcagactcag tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
 ctgcaaatga acagcctgag agccgaggac actgccgtgt attactgtgc gagaattaaa 300
 cggttacgat tcggctggac cccttttgac tactggggcc agggtagact ggtcaccgtg 360
 agtca 366

<210> 34
 <211> 333
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 nucleotide sequence

<400> 34
 cagtctgttc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc 60
 tcctgttctg gaagcagctc caacatcgga aataatggtg taaactggta tcagcagctc 120
 ccaggaaagg ccccaaaact cctcatctat ggtaacaaca atcggccctc aggggtccct 180
 gaccgattct ctggctccaa gtctggcacc tcagcctccc tggccatcag tgggctccgg 240
 tccgaggatg aggctgatta ttactgtgca gcatgggatg acagcctgag tggttggctg 300
 ttcggcgag gaaccaagct gacggtccta ggt 333

<210> 35
 <211> 369
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 nucleotide sequence

<400> 35
 gaggtgcagc tgttggagtc tgggggagggc ttggtacagc ctgggggggtc cctgagactc 60
 tcctgtgcag cctctggatt caccttcagt aacgcctgga tgagctgggt ccgccaggct 120
 ccagggaagg ggctggagtg ggtctcatcc attagtagta gtagtagtta catatactac 180
 gcagactcag tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240
 ctgcaaatga acagcctgag agccgaggac actgccgtgt attactgtgc gagagtcaat 300
 agcaaaaagt ggtatgaggg ctacttcttt gactactggg gccagggtag actggtcacc 360
 gtgagctca 369

<210> 36
 <211> 333
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 nucleotide sequence

<400> 36
 cagtctgtgc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc 60
 tcctgctctg gaagcagctc caacattggg aataattatg tatcctggta tcagcagctc 120
 ccaggaacgg cccccaaact cctcatctat ggtaacagca atcggccctc aggggtccct 180
 gaccgattct ctgggtccaa gtctggcacc tcagcctccc tggccatcag tgggtcccg 240
 tccgaggatg aggctgatta ttactgtgca gcatgggatg acagtctgag tgggtgggtg 300
 ttcggcggag gaaccaagct gacggtccta ggt 333

<210> 37
 <211> 375
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 nucleotide sequence

<400> 37
 gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggggc cctgagactc 60
 tcctgtgcag cctctggatt caccttcagt aacgcctgga tgagctgggt ccgccaggct 120
 ccagggaagg ggctggagtg ggtctcatcc attagtacta gtagtaatta catatactac 180
 gcagactcag tgaagggccg gttcaccatc tccagagaca attccaagaa cacgctgtat 240
 ctgcaaatga acagcctgag agccgaggac actgccgtgt attactgtgc gagagtcaag 300
 aagtatagca gtggctggta ctcgaattat gcttttgata tctggggcca aggtacactg 360
 gtcaccgtga gctca 375

<210> 38
 <211> 333
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 nucleotide sequence

<400> 38
 cagtctgtgc tgactcagcc accctcagcg tctgggaccc ccgggcagag ggtcaccatc 60
 tcctgctctg gaagcagctc cagcattggg aataattttg tatcctggta tcagcagctc 120
 ccaggaacgg cccccaaact cctcatctat gacaataata agcgaccctc aggggtccct 180
 gaccgattct ctgggtccaa gtctggcacc tcagcctccc tggccatcag tgggtcccg 240
 tccgaggatg aggctgatta ttactgtgca gcatgggatg acagcctgaa tgggtgggtg 300
 ttcggcggag gaaccaagct gacggtccta ggt 333

<210> 39
 <211> 20
 <212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 39

Phe Leu Asp Thr Val Tyr Gly Asn Cys Ser Thr His Phe Thr Val Lys
1 5 10 15

Thr Arg Lys Gly
20

<210> 40

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 40

Pro Gln Cys Ser Thr His Ile Leu Gln Trp Leu Lys Arg Val His Ala
1 5 10 15

Asn Pro Leu Leu
20

<210> 41

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 41

Val Ile Ser Ile Pro Arg Leu Gln Ala Glu Ala Arg Ser Glu Ile Leu
1 5 10 15

Ala His Trp Ser
20

<210> 42

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 42

Lys Leu Val Lys Glu Ala Leu Lys Glu Ser Gln Leu Pro Thr Val Met
 1 5 10 15

Asp Phe Arg Lys
 20

<210> 43

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 43

Leu Lys Phe Val Thr Gln Ala Glu Gly Ala Lys Gln Thr Glu Ala Thr
 1 5 10 15

Met Thr Phe Lys
 20

<210> 44

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 44

Asp Gly Ser Leu Arg His Lys Phe Leu Asp Ser Asn Ile Lys Phe Ser
 1 5 10 15

His Val Glu Lys
 20

<210> 45

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 45

Lys Gly Thr Tyr Gly Leu Ser Cys Gln Arg Asp Pro Asn Thr Gly Arg
 1 5 10 15

Leu Asn Gly Glu
 20

<210> 46
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 46
 Arg Leu Asn Gly Glu Ser Asn Leu Arg Phe Asn Ser Ser Tyr Leu Gln
 1 5 10 15

Gly Thr Asn Gln
 20

<210> 47
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 47
 Ser Leu Thr Ser Thr Ser Asp Leu Gln Ser Gly Ile Ile Lys Asn Thr
 1 5 10 15

Ala Ser Leu Lys
 20

<210> 48
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 48
 Thr Ala Ser Leu Lys Tyr Glu Asn Tyr Glu Leu Thr Leu Lys Ser Asp
 1 5 10 15

Thr Asn Gly Lys
 20

<210> 49
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 49

Asp	Met	Thr	Phe	Ser	Lys	Gln	Asn	Ala	Leu	Leu	Arg	Ser	Glu	Tyr	Gln
1				5					10					15	

Ala	Asp	Tyr	Glu
			20

<210> 50

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 50

Met	Lys	Val	Lys	Ile	Ile	Arg	Thr	Ile	Asp	Gln	Met	Gln	Asn	Ser	Glu
1				5					10					15	

Leu	Gln	Trp	Pro
			20

<210> 51

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 51

Ile	Ala	Leu	Asp	Asp	Ala	Lys	Ile	Asn	Phe	Asn	Glu	Lys	Leu	Ser	Gln
1					5				10					15	

Leu	Gln	Thr	Tyr
			20

<210> 52

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 52

Lys Thr Thr Lys Gln Ser Phe Asp Leu Ser Val Lys Ala Gln Tyr Lys
 1 5 10 15

Lys Asn Lys His
 20

<210> 53

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 53

Glu Glu Glu Met Leu Glu Asn Val Ser Leu Val Cys Pro Lys Asp Ala
 1 5 10 15

Thr Arg Phe Lys
 20

<210> 54

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 54

Gly Ser Thr Ser His His Leu Val Ser Arg Lys Ser Ile Ser Ala Ala
 1 5 10 15

Leu Glu His Lys
 20

<210> 55

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 55

Ile Glu Asn Ile Asp Phe Asn Lys Ser Gly Ser Ser Thr Ala Ser Trp
 1 5 10 15

Ile Gln Asn Val
 20

<210> 56
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 peptide

<400> 56
 Ile Arg Glu Val Thr Gln Arg Leu Asn Gly Glu Ile Gln Ala Leu Glu
 1 5 10 15

Leu Pro Gln Lys
 20

<210> 57
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 peptide

<400> 57
 Glu Val Asp Val Leu Thr Lys Tyr Ser Gln Pro Glu Asp Ser Leu Ile
 1 5 10 15

Pro Phe Phe Glu
 20

<210> 58
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 peptide

<400> 58
 His Thr Phe Leu Ile Tyr Ile Thr Glu Leu Leu Lys Lys Leu Gln Ser
 1 5 10 15

Thr Thr Val Met
 20

<210> 59
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 59

Leu Leu Asp Ile Ala Asn Tyr Leu Met Glu Gln Ile Gln Asp Asp Cys
1 5 10 15

Thr Gly Asp Glu
20

<210> 60

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 60

Cys Thr Gly Asp Glu Asp Tyr Thr Tyr Lys Ile Lys Arg Val Ile Gly
1 5 10 15

Asn Met Gly Gln
20

<210> 61

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 61

Gly Asn Met Gly Gln Thr Met Glu Gln Leu Thr Pro Glu Leu Lys Ser
1 5 10 15

Ser Ile Leu Lys
20

<210> 62

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 62

Ser Ser Ile Leu Lys Cys Val Gln Ser Thr Lys Pro Ser Leu Met Ile
 1 5 10 15

Gln Lys Ala Ala
 20

<210> 63

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 63

Ile Gln Lys Ala Ala Ile Gln Ala Leu Arg Lys Met Glu Pro Lys Asp
 1 5 10 15

Lys Asp Gln Glu
 20

<210> 64

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 64

Arg Leu Asn Gly Glu Ser Asn Leu Arg Phe Asn Ser Ser Tyr Leu Gln
 1 5 10 15

Gly Thr Asn Gln
 20

<210> 65

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 65

Ser Leu Asn Ser His Gly Leu Glu Leu Asn Ala Asp Ile Leu Gly Thr
 1 5 10 15

Asp Lys Ile Asn
 20

<210> 66
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 peptide

<400> 66
 Trp Ile Gln Asn Val Asp Thr Lys Tyr Gln Ile Arg Ile Gln Ile Gln
 1 5 10 15
 Glu Lys Leu Gln
 20

<210> 67
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 peptide

<400> 67
 Thr Tyr Ile Ser Asp Trp Trp Thr Leu Ala Ala Lys Asn Leu Thr Asp
 1 5 10 15
 Phe Ala Glu Gln
 20

<210> 68
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 peptide

<400> 68
 Glu Ala Thr Leu Gln Arg Ile Tyr Ser Leu Trp Glu His Ser Thr Lys
 1 5 10 15
 Asn His Leu Gln
 20

<210> 69
 <211> 20
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 69

Ala	Leu	Leu	Val	Pro	Pro	Glu	Thr	Glu	Glu	Ala	Lys	Gln	Val	Leu	Phe
1				5				10						15	

Leu	Asp	Thr	Val
			20

<210> 70

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 70

Ile	Glu	Ile	Gly	Leu	Glu	Gly	Lys	Gly	Phe	Glu	Pro	Thr	Leu	Glu	Ala
1				5				10						15	

Leu	Phe	Gly	Lys
			20

<210> 71

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 71

Ser	Gly	Ala	Ser	Met	Lys	Leu	Thr	Thr	Asn	Gly	Arg	Phe	Arg	Glu	His
1				5				10						15	

Asn	Ala	Lys	Phe
			20

<210> 72

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 72

Asn Leu Ile Gly Asp Phe Glu Val Ala Glu Lys Ile Asn Ala Phe Arg
 1 5 10 15

Ala Lys Val His
 20

<210> 73

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 73

Gly His Ser Val Leu Thr Ala Lys Gly Met Ala Leu Phe Gly Glu Gly
 1 5 10 15

Lys Ala Glu Phe
 20

<210> 74

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 74

Phe Lys Ser Ser Val Ile Thr Leu Asn Thr Asn Ala Glu Leu Phe Asn
 1 5 10 15

Gln Ser Asp Ile
 20

<210> 75

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 peptide

<400> 75

Phe Pro Asp Leu Gly Gln Glu Val Ala Leu Asn Ala Asn Thr Lys Asn
 1 5 10 15

Gln Lys Ile Arg
 20

<210> 76
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 76
 ccagtcacg acgttgtaaa acg 23

<210> 77
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 77
 gaaacagcta tgaaatacct attgc 25

<210> 78
 <211> 17
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 78
 caggaaacag ctatgac 17

<210> 79
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 79
 agaccaagc tagcttgga c 21